

Claims after this response:

1. (Original) An electronic circuit, comprising:

circuit elements arranged in an array of rows and columns, said circuit elements being alterable in response to data stored therein and configured to shift data therebetween; and

a strobe line electrically coupled to ones of said circuit elements constituting a set to provide thereto a strobe signal to cause said ones of said circuit elements in said set to shift data to non-adjacent ones of said circuit elements outside said set in an interleaving pattern, said set including row-adjacent and column-adjacent ones of said circuit elements.

2. (Canceled)

3. (Currently Amended) The electronic circuit of Claim 21, wherein:

said strobe line is electrically coupled to ones of said circuit elements located in a first pair of adjacent rows of the array to provide a first strobe signal to said ones of said circuit elements located in the first pair of adjacent rows; and

said electronic circuit additionally comprises an additional strobe line electrically coupled to ones of said circuit elements located in a second pair of adjacent rows of the array to provide a second strobe signal to said ones of said circuit elements located in the second pair of adjacent rows.

4. (Original) The electronic circuit of Claim 3, wherein said first strobe signal is operable to shift data from said ones of said circuit elements in the first pair of adjacent rows to said ones of said circuit elements in the second pair of adjacent rows.

5. (Currently Amended) The electronic circuit of Claim 1, wherein said strobe line is electrically coupled to ones of said ~~light modulation~~circuit elements located in at least a portion of at least two adjacent columns of the array.

6. (Original) The electronic circuit of Claim 1, wherein said strobe line is electrically coupled to at least two groups of orthogonally-adjacent ones of said circuit elements, said at least two groups being positioned diagonally in the array with respect to one another.

7. (Original) The electronic circuit of Claim 6, wherein said orthogonally-adjacent ones of said circuit elements are in at least two adjacent rows.

8. (Original) The electronic circuit of Claim 6, wherein said orthogonally-adjacent ones of said circuit elements are in at least two adjacent columns.

9. (Original) The electronic circuit of Claim 1, further comprising: a buffer connected to at least one end of the array to load the data into ones of said circuit elements.

10. (Currently Amended) The electronic circuit of Claim 9, wherein said buffer is configured to load data into said ones of said circuit elements in at least a portion of at least two of the rows of the array.

11. (Currently Amended) The electronic circuit of Claim 9, wherein said buffer is configured to load data into said ones of said circuit elements in at least a portion of at least two of the columns of the array.

12. (Original) The electronic circuit of Claim 9, wherein said buffer comprises buffer elements, each of said buffer elements loading data into a respective portion of the array, said strobe line being within a second portion of the array and being connected to clock one of said buffer elements associated with a first portion of the array to load data into the first portion of the array.

13. (Original) The electronic circuit of Claim 1, wherein said circuit elements are light modulation elements, said light modulation elements including:

memory elements configured to store the data and shift the data therebetween;
and

pixel controllers configured to alter the state of respective ones of said light modulation elements in response to the data stored in respective ones of the memory elements.

14. (Original) The electronic circuit of Claim 13, wherein the memory elements include two groups of the memory elements, the pixel controllers being controlled by the memory elements in an interleaving pattern between the two groups of memory elements.

15. (Currently Amended) The ~~spatial light modulator~~ electronic circuit of Claim 13, wherein each of the memory elements further includes an output node electrically coupled to the respective pixel controller and to an input node of a non-adjacent one of the memory elements.

16. (Currently amended) The ~~spatial light modulator~~ electronic circuit of Claim 13, wherein said light modulation elements comprise liquid crystal material.

17. (Currently Amended) The ~~spatial light modulator~~ electronic circuit of Claim 16, wherein:

the pixel controllers include pixel electrodes configured to receive the data stored in the respective memory elements, and

said light modulation elements collectively comprise a common electrode configured to receive a common electrode signal for said light modulation elements.

18. (Currently Amended) The ~~spatial light modulator~~ electronic circuit of Claim 13, wherein:

said light modulation elements additionally include micromirrors, and

the pixel controllers comprise electromechanical devices configured to control the state of said respective ones of said micromirrors in response to the data stored in respective ones of said memory elements.

19. (Currently Amended) The ~~spatial light modulator~~ electronic circuit of Claim 1, wherein said electronic circuit additionally comprises:

additional strobe lines; and

a shift register electrically connected to said strobe lines to apply the strobe signals sequentially thereto.

20. (Currently Amended) The ~~spatial light modulator~~ electronic circuit of Claim 19, wherein said shift register implements a ripple clock.

21. (Original) A method for performing photolithography, said method comprising:

loading data representing an image into light modulation elements;

altering ones of the light modulation elements in response to the data loaded therinto to transfer an instance of the image onto a substrate;

shifting the data between non-adjacent ones of the light modulation elements in an interleaving pattern;

altering ones of the light modulation elements in response to the data shifted therinto to transfer another instance of the image onto the substrate.

22. (Original) The method of Claim 21, wherein each said altering further comprises:

applying a voltage in response to the data to change optical characteristics of the light modulation elements.

23. (Original) The method of Claim 21, wherein said shifting further comprises:

applying strobe signals to strobe lines electrically coupled to respective ones of said light modulation elements to cause the data to be shifted between the non-adjacent ones of the light modulation elements.

24. (Original) The method of Claim 23, wherein said applying further comprises:

utilizing a ripple clock to control the timing of said applying.

25. (Original) The method of Claim 23, further comprising:

providing the light modulation elements arranged in an array of rows and columns.

26. (Original) The method of Claim 25, wherein said shifting further comprises:

applying the strobe signals to respective sets of the light modulation elements, at least one of the sets comprising ones of the light modulation elements in at least a portion of at least two adjacent rows; and

shifting the data between the light modulation elements in non-adjacent rows.

27. (Currently Amended) The method of Claim 25, wherein said shifting further comprises:

applying the strobe signals to respective sets of the light modulation elements, at least one of the sets comprising ones of the light modulation elements in at least a portion of at least two adjacent columns; and

shifting the data between the light modulation elements in non-adjacent columns.

28. (Original) The method of Claim 25, wherein said shifting further comprises:

applying the strobe signals to respective sets of the light modulation elements, at least one of the sets comprising ones of the light modulation elements in at least two groups of orthogonally-adjacent ones of the light modulation elements, the at least two groups being positioned diagonally within the array with respect to one another.

29. (Original) The method of Claim 21, wherein:

the method additionally comprises providing the light modulation elements arranged in an array of rows and columns; and
loading the data into the light modulation elements at one end of the array.

30. (Original) The method of Claim 29, wherein said loading further comprises:

loading the data into one set the light modulation elements in at least a portion of at least two rows of the array.

31. (Original) The method of Claim 29, wherein said loading further comprises:

loading the data into ones of the light modulation elements in at least a portion of at least two columns of the array.

32. (Currently Amended) The method of Claim 29, wherein said loading comprises loading data into a first section of the array in response to a first strobe signal derived from the a second strobe signal used to shift data in a second section of the array.